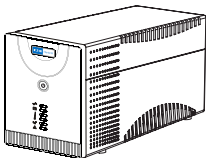




*Powering Business Worldwide*

# User Manual

Eaton ENV1000L/H, Eaton ENV1400H, Eaton ENV2000H

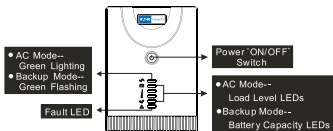


[www.eaton.com/nvups](http://www.eaton.com/nvups)

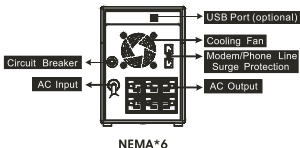


## System Description

### Front Panel --



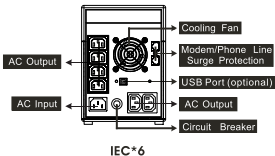
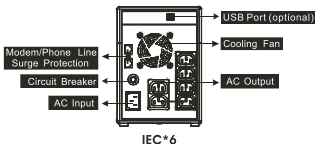
### Back Panel --





## System Description

### *Back Panel --*





# Specification

MODEL		ENV1000L	ENV1000H
CAPACITY	VA/W	1000VA/600W	1000VA/600W
INPUT	Voltage	110/120VAC	220/230/240VAC
	Voltage Range	89-145VAC/160-290VAC	
OUTPUT	Voltage	110/120VAC	220/230/240VAC
	Voltage Regulation (Batt. Mode)	+/- 10%	
	Frequency	50Hz or 60Hz	
	Frequency Regulation (Batt. Mode)	+/- 1Hz	
	Output Waveform	Modified Sinewave	
BATTERY	Battery Type & Number	12V/7.0 Ah x 2pcs	
	Back-up time with two PC (typical 200W)	15minutes	
	Recharge Time	10 hours to 90% after complete discharge	
TRANSFER TIME	Typical	4-6 ms	
INDICATOR	AC Mode	The 1st green LED lighting, and the 2nd to 5th green LEDs gradually lighting indicating load level	
	Backup Mode	The 1st green LED flashing, and the 2nd to 5th green LEDs gradually lighting indicating battery capacity	
	Fault	Red LED lighting	
AUDIBLE ALARM	Backup Mode	Sounding every 10 seconds	
	Low Battery	Sounding every second	
	Overload	Sounding every 0.5 seconds	
	Fault	Continuously Sounding	
PROTECTION	Surge Suppression	EN50091-2 Level 3	
	Full Protection	Discharge, overcharge, and overload protection	
PHYSICAL	Dimension DxWxH	399x145x205mm	399x145x205mm
	Net Weight	9.6kgs	
ENVIRONMENT	Operating Environment	0-40°C, 0-90% relative humidity (non-condensing)	
	Noise Level	Less than 50dB	
INTERFACE	USB	Support Windows 98/NT/2000/ME/xp/2003/Vist	



# Specification

MODEL		ENV1400H	ENV2000H
CAPACITY	VA/W	1400VA/840W	2000VA/1200W
INPUT	Voltage	220/230/240VAC	
	Voltage Range	166-290VAC	
OUTPUT	Voltage	220/230/240VAC	
	Voltage Regulation (Batt. Mode)	+/-10%	
	Frequency	50/60Hz	
	Frequency Regulation (Batt. Mode)	+/- 1Hz	
	Output Waveform	Modified Sinewave	
BATTERY	Battery Type and Number	12V/9Ah*2pcs(24V model)	
	Back-up time with two PC (typical 200W)	25 minutes	
	Recharge Time	6 hours to 90% after complete discharge	
TRANSFER TIME	Typical	4-6 ms	
INDICATOR	AC Mode	The 1" Green Led Lighting. (The 2"to 5" green Led lighting to indicate load level)	
	Backup Mode	The 1" Green Led blinking. (The 2"to 5" green Led lighting to indicate battery capacity)	
	Fault	Red LED lighting	
AUDIBLE ALARM	Backup Mode	Sounding every 10 seconds	
	Low Battery	Sounding every 1 second	
	Overload	Sounding every 0.5 seconds	
	Fault	Continuously Sounding	
PROTECTION	Full Protection	Overcharge and overload protection	
PHYSICAL	Dimension DxWxH	405x145x205mm	
	Unit Weight	9.63kgs	9.77kgs
ENVIRONMENT	Operating Environment	0-40℃, 0-90% relative humidity (non-condensing)	
	Noise Level	Less than 50dB	
INTERFACE	USB	Support Windows 98/NT/2000 /ME/xp/2003/Vista	



## Trouble Shooting

Symptom	Possible Cause	Remedy
No LED display on the front panel.	1. Missing battery.	1. Charge battery up to 10 hours.
	2. Battery defect.	2. Replace with the same type of battery.
	3. Power switch is not pressed.	3. Press power switch again.
Alarm buzzer beeps continuously when AC supply is normal.	Overload of the UPS.	Verify that the load matches the UPS capability specified in the specs.
When power failure, backup time is shortened.	1. Overload of the UPS.	1. Remove some noncritical load.
	2. Battery voltage is too low.	2. Charge battery for 10 hours or more.
	3. Battery defect due to high temperature operation environment, or improper operation to battery.	3. Replace with the same type of battery.
Communication lost between UPS and computer.	1. Software is not installed well.	1. Check the setting of the software.
	2. Cable is not properly connected.	2. Check the RS-232/USB cable is firmly connected with the computer and confirm the setting again.
Mains normal but the UPS is not working.	1. Circuit breaker is broken.	1. Reset the circuit breaker.
	2. Power cord is loose.	2. Reconnect the power cord properly.

If any abnormal situations occur that are not listed above, please call service people immediately.

## Safety -- Caution!!

- Do not dispose of batteries in a fire as they may explode.
- A battery can present a risk of electrical shock and high short circuit current. The following precautions should be observed when working on batteries:
  - 1) Remove watches, rings, or other metal objects from the hands.
  - 2) Use tools with insulated handles.
  - 3) Wear rubber gloves and boots.
  - 4) Do not lay tools or metal parts on top of batteries.
  - 5) Disconnect charging source prior to connecting or disconnecting batteries terminal.
- Servicing of batteries should be performed or supervised by personnel knowledgeable of batteries and the required precautions. Keep unauthorized personnel away from batteries.
- When replacing batteries, replace with the same number and type of sealed lead-acid battery.
- This pluggable type A equipment with battery already installed by the supplier is operator installable and may be operated by laymen.
- The mains socket outlet that supplies the UPS shall be installed near the UPS and shall be easily accessible.
- During the installation of this equipment it should be assured that the sum of the leakage currents of the UPS and the connected loads does not exceed 3.5mA.
- Unplug the UPS prior to cleaning and do not use liquid or spray detergent.

# Safety -- Caution!!

## ★ Wichtige Sicherheitshinweise

Bitte lesen Sie diese Hinweis sorgfältig durch.

- Vor jedem reinigen ist das Gerät vom Stromnetz zu trennen. Verwenden Sie Keine Flüssig-oder Aerosolreiniger. Am besten eignet sich ein angefeuchtetes Tuch zur Reinigung.
- Das Gerät ist vor Feuchtigkeit zu schützen.
- Öffnen Sie niemals das Gerät. Das Gerät darf aus Gründen der elektrischen Sicherheit nur von autorisiertem Servicepersonal geöffnet werden.
- Bei der Installation ist darauf zu achten, dass der Gesamtbleitstrom der USV und der and der USV angeschlossenen Verbraucher den. Maximalwert von 3.5mA nicht überschreiten.
- VORSICHT: Explosionsgefahr bei unsachgemäßen Austausch der Batterie. Ersatz nur durch denselben oder einem vom Hersteller empfohlenen ähnlichen typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.





# IMPORTANT SAFETY INSTRUCTION

**SAVE THESE INSTRUCTION** – This manual contains important instructions for models ENV1000L/H, ENV1400H, ENV2000H that should be followed during installation and maintenance of the UPS and batteries.

## Safety -- Caution!!

- This UPS utilizes voltage that may be hazardous. Do not attempt to disassemble the unit. The unit contains no user replaceable parts. Only factory service personnel may perform repairs.
- Internal voltage of each battery is 12Vdc, Sealed, lead-acid, 6 cells battery
- Connection to any other type of receptacle other than a two-pole, three-wire grounded receptacle may result in shock hazard as well as violate local electrical codes.
- In the event of an emergency, press the "OFF" button and disconnect the power cord from the AC power supply to properly disable the UPS.
- Do not allow any liquids or any foreign object to enter the UPS. Do not place beverages or any other liquid-containing vessels on or near the unit.
- This unit intended for installation in a controlled environment (temperature controlled, indoor area free of conductive contaminants). Avoid installing the UPS in locations where there is standing or running water, or excessive humidity.
- Do not plug the UPS input into its own output.
- Do not attach a power strip or surge suppressor to the UPS.
- Do not attach non-computer-related items, such as medical equipment, life-support equipment, microwave ovens, or vacuum cleaners to UPS.
- To reduce the risk of overheating the UPS, do not cover the UPS' cooling vents and avoid exposing the unit to direct sunlight or installing the unit near heat emitting appliances such as space heater or furnaces.
- Do not open or mutilate the battery or batteries. Release electrolyte is harmful to the skin and eyes. It may be toxic.
- Attention, hazardous through electric shock. Also with disconnection of this unit from the mains, hazardous voltage still may be accessible through supply from battery. The battery supply should be therefore disconnected in the plus and minus pole at the connectors of the battery when maintenance or service work inside the UPS is necessary.



## Installation and Operation

Installing the UPS is as easy as following the steps shown. Be aware of the Power Switch must be kept in the "ON" position, otherwise, the UPS will be disabled and your equipment will not be protected during a power failure.

**1**

### Inspection

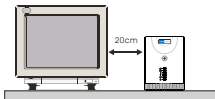
Remove the UPS from its package and inspect it for damage that may have occurred during shipping. If any damage is discovered, re-pack the unit and return it to the place of purchase.



## 2

### Placement

Install the UPS unit in any protected environment that provides adequate airflow around the unit, and is free from excessive dust, corrosive fumes and conductive contaminants. Do not operate your UPS in an environment where the ambient temperature or humidity is high. On the other hand, place the UPS unit away from the monitor at least 20cm to avoid interference.



# 3

## Charging

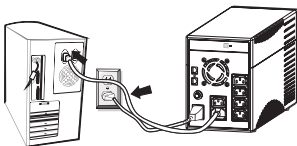
This unit is shipped from the factory with its internal battery fully charged, however, some charge may be lost during shipping and the battery should be recharged prior to use. Plug the unit into an appropriate power supply and allow the UPS to charge fully by leaving it plugged in for at least 10 hours.



# 4

## Computer Connection

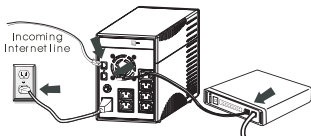
Connect one computer-related device into each of the power receptacles supplied on the back of the UPS.



5

### Modem/Phoneline Connection

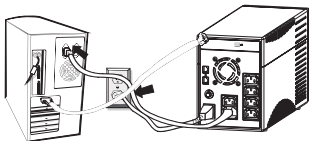
Plug incoming internet line into the "In" socket at the back of the UPS. Use one more Internet line cable and plug one end of the Internet line cable to the "Out" socket at the back of the UPS. Plug the other end to the modem input socket as shown below.



6

### Communication cable connection

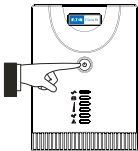
To allow for unattended system shutdown for your operating system, connect the USB or Serial cable as per diagram below



**7**

## Turn On/Off

To turn on the UPS unit, press the power switch lightly. To turn off the UPS unit, press the power switch again.

**8**

## DC Start Function

DC Start Function enables UPS to be started up when AC utility power is not available and battery is fully charged. Just simply press the power switch to turn on the UPS.

9

## Battery Replacement

Follow Chart 1 to Chart 3 to replace the battery. Disconnecting all sources of supply before battery replacement.

Unscrew the panel



Remove the front panel

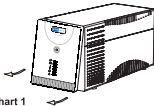


Chart 1

Remove the battery cover



Chart 2

After removing the battery cover, gently extract the batteries by disconnecting the two wires connecting to the UPS. Be sure to replace with the same type of batteries and dispose of old batteries properly at an appropriate recycling facility.

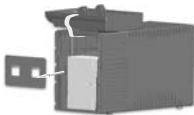


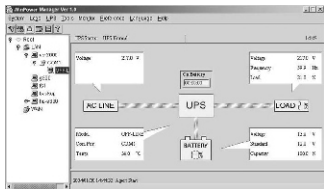
Chart 3

Be sure replaced the same type of the batteries and dispose of old batteries properly at an appropriate recycling facility.



# WinPower Software

WinPower is a brand new UPS monitoring software, which provides user-friendly interface to monitor and control your UPS. This unique software provides safely auto shutdown for multi-computer systems while power failure. With this software, users can monitor and control any UPS on the same LAN no matter how far from the UPSs.



## Installation procedure:

Please refer to the installation procedures in the manual of winpower software or the readme file on the software CD for details